

## CurriculumVisions Lesson

Students: fill in next to the word answer and return the document for assessment.

### Science

Book: Changing sounds (5F)

Pages 12-17

Everything here is based on our Curriculum Visions book Changing sounds (5F)

In this segment, we are going to learn about how sounds can be made louder or quieter.

#### Part 1

You will need to go to pages 12-13 of the book. Describe what happens to a sound when it hits a hard wall at an angle. What happens if the wall is a rough surface?

Answer.....

The sound waves reflect – they bounce off at the same angle they arrive.

If the waves hit a rough surface, the sound waves are scattered, so the reflected sound is quieter than the arriving sound.

What causes an echo?

Answer.....

When sound bounces off a hard surface in a large space, the it takes longer for the bounced sound to reach your ears than for the original sound to reach your ears – so you hear what seems like two separate sounds.

#### Part 2

Go to pages 14-15. What is damping?

Answer.....

This is when sound vibrations are made smaller, to make sound quieter.

Describe an experiment using a ruler and an elastic band to test ways to dampen a vibration. If your teacher agrees, conduct the investigations Where did you put the damper to have the greatest effect?

Answers will vary.....

Students should be directed to the material on pages 14 and 15, especially pictures 3, 4 and 5. Generally, the closer the dampener is to the cause of the vibration, the greater the effect.

### Part 3

Go to pages 16-17. What are some ways to muffle sound?

Answers may include.....

Double glazing (making a sandwich with a vacuum in the middle); using rough materials with holes to soak up sound vibrations (furniture, carpet, etc.); using soundproofing in buildings to stop sound travelling; using a muffler/silencer (bouncing sounds around so they cancel each other out).

Look around your home or school. What are some different ways that sound is muffled?

Answers will vary.....

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If you are interested in this topic continue to browse the book and watch our amazing videos. They start right on the book cover.